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ASSESSMENT OF KNOWLEDGE REGARDING NEEDLESTICK INJURIES AMONG SECOND-YEAR B.SC. NURSING AND GNM STUDENTS AT A NURSING COLLEGE IN VIJAYAPUR, KARNATAKA.

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Article Info	ABSTRACT
<i>Received 25/12/2025</i> <i>Revised 03/01/2026</i> <i>Accepted 26/01/2026</i>	Background: Needlestick injuries are a significant occupational hazard among nursing students and healthcare workers. Exposure to contaminated needles and other sharp instruments can lead to transmission of serious blood-borne infections, including hepatitis B, hepatitis C, and HIV. Nursing students are particularly vulnerable because of their frequent involvement in clinical procedures. Adequate knowledge regarding prevention, safe handling and disposal of sharps, and appropriate post-exposure management is essential for preventing needlestick injuries. Objectives: To assess the knowledge regarding needlestick injuries among second-year B.Sc. Nursing and second-year GNM students and to develop an information booklet on the prevention and management of needlestick injuries. Methods: A quantitative evaluative research approach was adopted using a one-group pretest–posttest design. The study was conducted among 48 second-year B.Sc. Nursing and GNM students at Al-Ameen Fathima College of Nursing, Vijayapur, Karnataka. Participants were selected using purposive sampling. Data were collected using a structured knowledge questionnaire. An information booklet regarding needlestick injuries, preventive measures, and post-exposure management was developed and provided to the participants. Descriptive statistics and chi-square tests were used for data analysis. Results: Among the 48 participants, 75% belonged to the 20–25-year age group, 54.16% were male, and 64.58% were second-year B.Sc. Nursing students. In the initial assessment, 85.4% of participants had good knowledge, 12.5% had excellent knowledge, and 4.16% had poor knowledge regarding needlestick injuries. Following the information booklet intervention, 45.83% demonstrated excellent knowledge, 52.08% demonstrated good knowledge, and only 2.09% had poor knowledge. A significant association was observed between knowledge level and selected demographic variables, including gender and educational qualification. Conclusion: The findings indicate that an information booklet can be a useful educational resource for improving nursing students' knowledge regarding needlestick injuries. Regular educational programs and reinforcement of standard precautions, safe sharps handling, appropriate disposal practices, and
Key word: Needlestick Injuries; Knowledge; Nursing Students; B.Sc. Nursing; Gnm Students; Information Booklet; Standard Precautions; Occupational Exposure.	



		post-exposure management are recommended to reduce the risk of needlestick injuries among nursing students.
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INTRODUCTION

Needlestick injuries are an important occupational hazard among healthcare workers and nursing students. A needlestick injury is a percutaneous injury caused by a needle or other sharp instrument that may be contaminated with blood or other potentially infectious body fluids. Such injuries can expose healthcare personnel to blood-borne pathogens, including hepatitis B virus, hepatitis C virus, and human immunodeficiency virus.

Nursing students are frequently exposed to needles and other sharp instruments during clinical training. Inadequate knowledge regarding safe handling and disposal of sharps, prevention of needlestick injuries, immediate first aid, reporting procedures, and post-exposure management may increase the risk of occupational exposure. The prevention of needlestick injuries requires adherence to standard precautions, safe injection practices, appropriate disposal of sharps, and timely management after exposure.

The available study data show that nursing students were assessed using a structured knowledge questionnaire, and an information booklet was used as an educational intervention. The study was conducted among second-year B.Sc. Nursing and second-year GNM students at Al-Ameen Fathima College of Nursing, Vijayapur, Karnataka.

MATERIALS AND METHODS

Research Approach and Design

A quantitative evaluative research approach was adopted for the present study. A one-group pretest–posttest research design was used to assess the knowledge regarding needlestick injuries among nursing students and to evaluate the usefulness of an information booklet. The study was conducted at Al-Ameen Fathima College of Nursing, Vijayapur, Karnataka. The study population comprised second-year B.Sc. Nursing and second-year GNM students. A total of 48 students participated in the study and were selected using a purposive sampling technique.

Data were collected using a structured knowledge questionnaire developed to assess the participants' knowledge regarding needlestick injuries. The questionnaire included items related to the meaning and causes of needlestick injuries, risk of blood-borne infections, standard precautions, prevention of needlestick injuries, safe handling and disposal of needles and other sharps, immediate first aid, reporting procedures, and post-exposure management.

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An information booklet was developed based on a review of relevant literature and consultation with



nursing experts. The booklet included information on the prevention, immediate management, reporting, and post-exposure care of needlestick injuries.

A total of 48 nursing students participated in the study. The majority of participants were aged 20–25 years, male, and studying in the second year of B.Sc. Nursing.

The available dissertation data indicate that the post-intervention assessment showed 22 (45.83%) participants with excellent knowledge, 25 (52.08%) with good knowledge, and 1 (2.09%) with poor knowledge.

Data for Graph:

- Poor knowledge: 2 (4.16%)
- Good knowledge: 41 (85.40%)
- Excellent knowledge: 5 (12.50%)

Data For Graph:

- Poor knowledge: 1 (2.09%)
- Good knowledge: 25 (52.08%)
- Excellent knowledge: 22 (45.83%)

DISCUSSION

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The present study assessed knowledge regarding needlestick injuries among 48 second-year B.Sc. Nursing and GNM students. The study was conducted at Al-Ameen Fathima College of Nursing, Vijayapur, Karnataka, using a structured knowledge questionnaire. The use of an information booklet was intended to provide students with accessible information regarding prevention and appropriate management of needlestick injuries.

The demographic findings showed that the majority of participants, 36 (75%), belonged to the 20–25-year age group. Males constituted 26 (54.16%) of the participants, while females constituted 22 (45.83%). Second-year B.Sc. Nursing students formed the largest group, with 31 (64.58%) participants, while 17 (35.41%) were second-year GNM students.

Before the educational intervention, most participants had good knowledge regarding needlestick injuries. However, only a small proportion demonstrated excellent knowledge, indicating the need for continued educational reinforcement. After the information booklet intervention, the proportion of participants with excellent knowledge increased to 22 (45.83%), while only 1 (2.09%) participant remained in the poor-knowledge category.

Table 1: Sociodemographic Characteristics of Participants (n=48)

Variable	Category	n	%
Age	15–20 years	12	25.00
	20–25 years	36	75.00
	Above 25 years	0	0.00
Gender	Male	26	54.16
	Female	22	45.83
Course of study	Second-year B.Sc. Nursing	31	64.58
	Second-year GNM Nursing	17	35.41
Religion	Hindu	20	41.60
	Muslim	27	56.25
	Christian	1	2.08

Table 2: Distribution of Participants according to Knowledge Level Before and After the Information Booklet (n=48)

Knowledge level	Pre-intervention n (%)	Post-intervention n (%)
Poor	2 (4.16)	1 (2.09)
Good	41 (85.40)	25 (52.08)
Excellent	5 (12.50)	22 (45.83)
Total	48 (100)	48 (100)



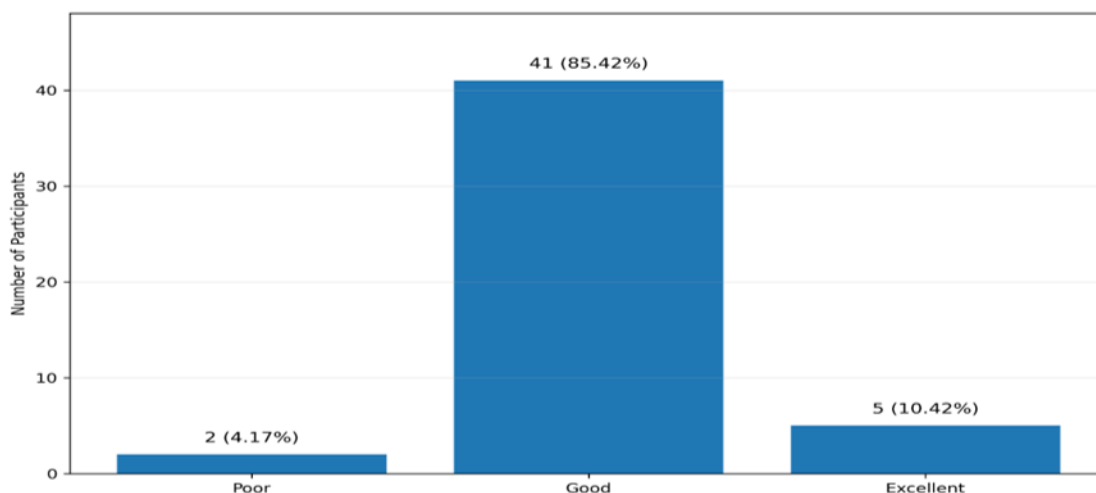


Figure 1: Pre-intervention Knowledge Level Regarding Needlestick Injuries

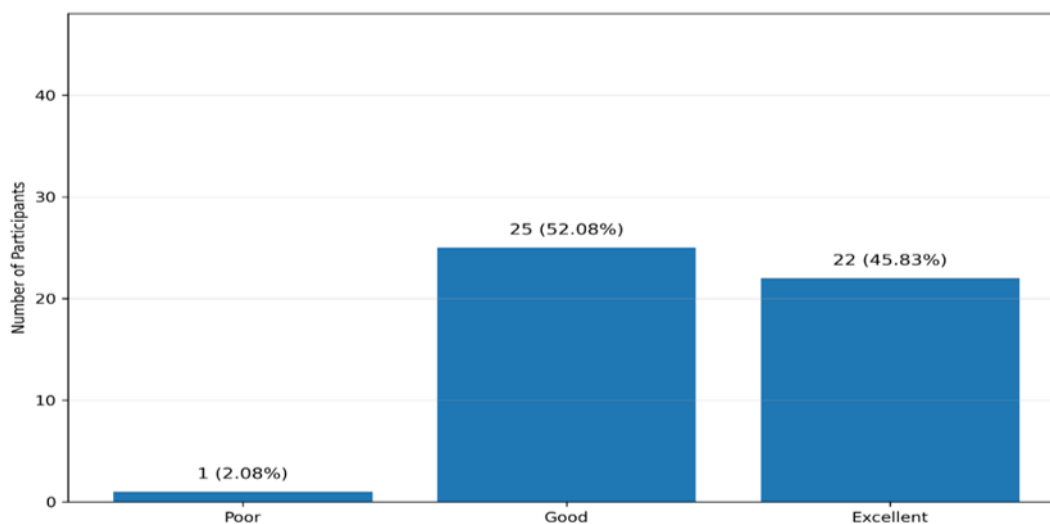


Figure 2: Post-Intervention Knowledge Level After the Information Booklet

These findings support the importance of structured educational materials for improving students' understanding of needlestick injury prevention and post-exposure management. Nursing students should receive repeated education on standard precautions, safe disposal of sharps, avoidance of needle recapping, and immediate care after exposure, reporting of injuries, and appropriate post-exposure follow-up.

CONCLUSION

Needlestick injuries remain an important occupational risk for nursing students during clinical training. In this study of 48 second-year B.Sc. Nursing and GNM students, most participants demonstrated good knowledge regarding needlestick injuries, while a considerable proportion demonstrated excellent

knowledge after the information booklet intervention. The findings suggest that an information booklet may serve as a useful educational resource for improving awareness regarding needlestick injury prevention and management. Regular educational programs, reinforcement of standard precautions, and practical training regarding safe handling and disposal of sharps are essential for promoting safer clinical practice among nursing students.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations are made:



1. Similar studies may be conducted with a larger sample size involving nursing students from multiple institutions.
2. Regular educational programs should be conducted regarding prevention and management of needlestick injuries.
3. Practical demonstrations on safe handling and disposal of needles and sharps should be included in nursing education.
4. Nursing students should be educated regarding immediate first aid and reporting procedures following a needlestick injury.
5. The effectiveness of information booklets may be compared with other teaching methods, such as structured teaching programs, video-assisted teaching, and simulation-based education.
6. Further studies may assess the knowledge, attitude, and practices of nursing students regarding standard precautions and needlestick injury prevention.
7. Institutions should strengthen systems for reporting, documentation, and follow-up of occupational exposures.

CONFLICT OF INTEREST

The Authors Declare That There Is No Conflict Of Interest.

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